UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/118,572	07/17/1998	KARL J. WOOD	PHB34169US	9151

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EXAMINER
YANG, RYAN R

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/118,572	WOOD ET AL.
	Examiner	Art Unit	
	Ryan R Yang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>11 June 2002</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-11</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-5,7 and 9</u> is/are rejected.

7) ☒ Claim(s) <u>6,8,10 and 11</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   In view of the appeal brief filed on 6/11/2002, PROSECUTION IS HEREBY

REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied

by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130,

1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2.   Claims 1-11 are pending in this application. Claim 1 is independent claims.

This application claims foreign priority dated 7/17/1997.

3.   The present title of the invention is "Graphic image texture generation" as filed

originally.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

5.   Claims 1-5, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by

Rhoades et al. ("Real-time procedural textures", June 1992, Proceedings of the 1992

symposium in interactive 3D graphics, page 95-100) in view of Jenkins (6,111,582).

As per claim 1, Rhodes et al., hereinafter Rhodes, disclose an apparatus for

texture mapping in a computer graphics system (as illustrated in Figure 1), using a

predetermined set of standardized textures ("Procedural textures are implemented via a

simple virtual machine. This texture machine comprises an assembly language-like

instruction set called T-codes, a set of registers in pixel memory", page 96, 2nd column,

line 12-14), the apparatus having an input (since the system is interactive, the processor

is inherently having an input in order to receive commands) to receive via a network

identifying data identifying one of the set of standardized textures ("Graphics

Processors, Renderers, Frame Buffers, and workstation host communicate over a

shared 640 Mb/sec ring network", page 96, 1st column, line 20-22; thus, the system

forms a network), and

means for processing the data to generate output texels of the identified textures

(Figure 1, the Graphics Processor and Renderer process the data), wherein each

texture of the standardized set is a procedural texture (where the T-codes are the

procedural texture), the identifying data comprises one or a sequence of program

commands, the execution of which will result in the generation of a respective

procedural texture, with the means for processing data comprising a processor operable

to implement all such input program commands or sequences of input program

commands as required to generate the procedural texture of the standardized set

(Figure 1, the IGC commands is the instruction streams for the Renderers to rasterize the polygons).

6.   As per claim 2, Rhoades demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses having at least one further input for one or more predetermined classes of numerical parameter, with the processor being arranged to generate procedural textures with reference to the or each numerical parameter value received ("This texture machine comprises an assembly language-like instruction set called T-codes, a set of registers in pixel memory, and a set of parameters in the Graphics Processor Memory", page 96, 2nd column, line 13-16, and "the user can explore the parameter space of a procedure continuously in real time", page 98, column 1, line 21-23; thus, the parameters can be changes from input commands).

7.   As per claim 3, Rhodes demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses having at least one further input for a scale factor, with the processor being arranged to generate a procedural texture at a resolution determined by a received scale factor ("Examples of operators include add, scale, max, square root, spline, and color lookup", page 96, 2nd column, line 31-32; the parameters are accessible by input commands and scale is listed as one of the parameters).

8.   As per claim 4, Rhodes demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses the processor is operable to implement only such input program commands or sequences of input program

commands as required to generate those procedural textures of the standardized set

("The texture editor displays the T-code instructions of a selected procedural texture in a

text window. The user can position a movable cursor on any literal value in a T-code

instruction, and smoothly vary this value via a joystick", page 98, 1st column, line 14-17;

since the texture editor can only select procedure textures, it can implement only such

input program commands or sequences of input program commands as required to

generate those procedural textures of the standardized set.)

9.   As per claim 5, Rhoades demonstrated all the elements as applied to the

rejection of independent claim 1, supra, and further discloses a cache memory coupled

with the processor, with the processor being configured to generate said procedural

textures as texture maps within said cache (The Graphics Processor cache the IGC

commands resulting from texture interpretation to avoid generating them repeatedly,

page 97, 1st column, line 33-35).

10.   As per claim 7, Rhoades demonstrated all the elements as applied to the

rejection of dependent claim 4, supra, and as for fabricating the apparatus into a single

substrate, it is notoriously known in the art (Officially Notice) that a processor of many

elements can be fabricated onto a single substrate for the purposes of increasing

processing speed and reducing power and cost. See *In re Larson*, 340 F.2d 965, 144

USPQ 347 (CCPA 1965)

11.   As per claim 9, Rhoades demonstrated all the elements as applied to the

rejection of independent claim 1, supra, and further discloses a source of three-

dimensional polygon data (Figure 1, the Polygon Data in the Graphics Processor), a

geometry processor coupled to receive said polygon data and arranged to generate a

two-dimensional representation of said polygons (Figure 1, the Graphics Processor), a

source of program commands coupled to the input of the texture mapping apparatus

and specifying textures to be applied to respective ones of said polygons (Figure 1, the

IGC Commands), and rendering means coupled to receive the outputs of the geometry

processor and texture mapping apparatus and arranged to generate an output image of

said polygons with texture applied (Figure 1, the Renderer).

Allowable Subject Matter

12.   Claims 6, 8 and 10-11 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

        The following is a statement of reasons for the indication of allowable subject

matter:

        As per claim 6, the closest prior art by Rhoades et al. do not explicitly disclose

"an input to receive a scale factor, and an interpolator to generate output texels from

texture map entries in the cache at a resolution determined by the received scaled

factor".

        As per claim 10, the closest prior art by Rhoades et al. do not explicitly disclose

the limitations as claimed.

Response to Arguments

13.   Applicant's arguments with respect to claim 1 have been considered but are moot

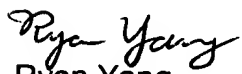in view of the new ground(s) of rejection.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to
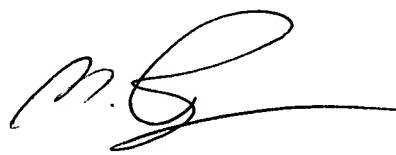
applicant's disclosure.

Inquiries

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ryan R Yang whose telephone number is (571) 272-

7666. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Ryan Yang
April 19, 2005

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER

Acting Director, TC 2600